



Fire Service Occupational Cancer Alliance

Proceedings from January 2015 – April 2016

June 2016





Introduction

Dear Fire Service Professional,

In the following pages, you will read a summary of the work to date of the Fire Service Occupational Cancer Alliance, as well as a full report of the October 2015 meeting. In the Alliance's brief history—just over a year—much has been accomplished by Alliance participants and others. The fire service has achieved several notable milestones in addressing cancer including reauthorization of the Zadroga Act, and legislation that has been introduced to develop a registry for firefighter cancers. The Alliance is unified and prepared to rally behind the “KNOW Firefighter Cancer” tagline.



Figure 1. 2016 CFSI Dinner Challenge Coin

But, much more needs to be done. Consider this. At our first meeting, I asked how many in the audience knew a firefighter who has or had cancer. Virtually everyone raised their hand. I then asked how many in the room were cancer survivors themselves. It was amazing how many hands went up in response to that question as well.

Two years ago, in March 2014, the National Fallen Firefighters Foundation hosted the 2014 Firefighter Life Safety Summit. This Summit, known as TAMPA2, provided numerous recommendations focusing on reducing firefighter injuries and deaths. One of the prevailing suggestions made by participants was the need to **focus greater attention on firefighter occupational illnesses and diseases**. Up until that point, a few organizations had been working to draw attention to the issue of cancer within the fire service, and to take actions to reduce firefighter exposures to carcinogens but there was not a unified strategy to address the problem as an industry.

In January 2015, as a follow-up to TAMPA2, the National Fallen Firefighters Foundation invited major fire service organizations and occupational cancer-specific researchers to attend an **Occupational Cancer in the Fire Service Strategy Meeting** in Washington D.C. The goals of the meeting were to review what was known related to firefighter cancers, develop a coordinated effort to reduce exposures, illnesses, and deaths related to cancer, and provide support for those affected by cancer. Through presentations, breakout group discussions, and a goal of consensus, the group developed 12 recommendations to target their efforts.

In May 2015, a Steering Committee comprised of a cross section of fire service leaders and researchers who attended the January 2015 meeting convened in Phoenix, Arizona. They were tasked with developing action steps for the objectives outlined at the previous meeting. At that meeting, it recommended that the group be called the **Fire Service Occupational Cancer Alliance**. The Steering Committee also asked that the larger group reconvene as soon as possible, to complete development of the Action Plan begun in May.



The next meeting of the Alliance was held in October 2015, in Arlington, Virginia. The Steering Committee reported their work to the group, and sought input on critical issues related to their recommendations. Now, with the completed plan of action, the Alliance is positioned to move forward in our battle with this insidious disease. Armed with the input provided in 2015, the Alliance will ask that organizations and individuals within the fire service agree to work as partners, embracing common goals to reduce the impact of occupational cancers in the fire service.

My greatest wish is that someday in the future, when a room of firefighters are asked how many have been – or are – battling cancer, very few hands are raised.

Chief Dennis Compton
Chair, Board of Directors
National Fallen Firefighters Foundation



A Call for Collaboration

Action to prevent firefighter occupational cancer and support those that have cancer must be a collaborative effort involving all parts of the fire department and affiliated organizations. The efforts of everyone need to be coordinated for us to be effective in this fight.

In career fire departments, management and the union must be on the same page.

In volunteer and combination fire departments, chief officers, first district or fire department leadership, and firefighters and company officers need to be together. Some departments have unions or member organizations that need to be part of the solution as well.

In the wildland community, where firefighters and fire officers may be full-time or seasonal, it's especially important for leadership to work with employee organizations to seek ways to prevent exposure and keep track of the health of all firefighters.

Our best chance of beating cancer is to work together.



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Occupational Cancer in the Fire Service Strategy Meeting (January 2015)

Fire service leaders, physicians, government officials, and scientists met on January 14-15, 2015 in Washington, D.C. for the Occupational Cancer in the Fire Service Strategy Meeting. The meeting was coordinated by the National Fallen Firefighters Foundation (NFFF) and chaired by Chief Dennis Compton, Chair of the Board of Directors of the NFFF.

This initial meeting brought together fire service leaders, representatives of the major fire service constituency organizations, and researchers to develop a unified strategy for addressing a growing issue in the industry. During this meeting, presentations, group discussions, and breakout session discussions were geared toward addressing the stated objectives of the meeting:

1. Learn what science can tell us about cancer in firefighters.
2. Identify what we think we know, but needs further research.
3. Review what has been done, and what needs to be done.
4. Address whether or not anyone is being left behind on the issue of firefighter cancer—are there specific populations who are not being studied or have been left out of the discussion?
5. Identify what organizations and corporate entities can be counted on as partners.
6. Discuss the Zadroga Act and its implications at the national, state, and local levels.
7. Review model state presumptive laws and strategies to push legislation in every state, including implications on workers' compensation and pension systems.
8. Discuss implications on the Line-of-Duty Death criteria, including those on workers' compensation and death benefits.

Presentations on the findings of recent firefighter cancer research included a study of World Trade Center firefighters, the challenges of firefighter occupational exposure research, future research needs, actions that can be taken to reduce the risk of cancer, and an update on state presumptive laws and the Zadroga Act.

Attendees discussed steps that can be taken now to further assess fire service occupational cancer and steps that can be taken in the future to research, prevent, document, and treat firefighter cancers. Participants were also divided into breakout groups to discuss objectives #4, #5, and #8 and then reported out to all attendees. The recommendations below reflect the overall discussions from the meeting.

Awareness and Prevention Recommendations

1. Provide firefighters with information on steps they can take to reduce the incidence of occupational cancer — including diet, physical conditioning, use and proper maintenance of personal protective equipment (PPE), tobacco cessation programs, and other steps.
2. Develop a single unified message on fire service priorities related to occupational cancer.
3. Provide firefighters and fire officers with a single resource on firefighter cancer, potentially modeled on the fire service-based EMS toolkit.



4. Communicate with firefighters and fire officers on every level regarding occupational cancer hazards and prevention strategies.

Research Needs

5. Include long-term chronic exposures to toxins in firefighter cancer research, including diesel exhaust, exposure to contaminated personal protective equipment (PPE), flame retardants, and other exposures.
6. Develop a means to quantify the incidence of firefighter occupational cancer—a national firefighter cancer registry with links and inputs from other fire service data sources.
7. Include under-represented firefighter populations in future research, including female firefighters, minority firefighters, volunteer firefighters, wildland firefighters, and increase geographical diversity.
8. Develop a national firefighter cancer research strategy to direct future research efforts.
9. Support funding for firefighter cancer research and the continuation of existing effective efforts such as the Zadroga Act.

Partnership Opportunities

10. Encourage and support the adoption of presumptive legislation to cover firefighters that suffer from cancer and their families.
11. Encourage the development of PPE that better protects firefighters from the hazards faced in the line of duty.
12. Work cooperatively with fire service and non-fire service organizations with an interest in the prevention and treatment of firefighter cancer including outside of the fire service such as the American Cancer Society, National Institutes of Health, insurance providers, and elected officials.

A Steering Committee comprised of a cross-section of attendees at this meeting was formed to help facilitate the prioritization and implementation of these recommendations.

A full report of the January 2015 meeting is available at:
<http://www.everyonegoeshome.com/wp-content/uploads/sites/2/2016/03/Cancer-Alliance-January-2015.pdf>



FSOCA Steering Committee Meeting (May 2015)

The initial meeting of the Steering Committee for the Fire Service Occupational Cancer Alliance was held at Phoenix Fire Department Headquarters on May 5, 2015. Chief Dennis Compton again facilitated the meeting.

The 12 recommendations from the January 2015 Occupational Cancer in the Fire Service Strategy Meeting were reviewed. The Steering Committee was then presented with six tasks and asked to make recommendations including 1) potential action items; 2) identifying organizational support; and 3) a suggested starting timeframe for each action item, noting that many of the action items will include ongoing activities. Timeframe estimates were defined as: (S) short term, or up to 12 months; (M) medium term, or up to 24 months; or (L) long term-up to 36 months. Below are the tasks assigned to the Steering Committee at the May meeting, and the associated action items that were outcomes of the group discussion:

Task #1 Identify potential steps related to research gaps and funding

- 1.1 – Convene the 3rd National Fire Service Research Agenda Symposium (S)
- 1.2 – Discuss cancer research at the next Assistance to Firefighters Grant (AFG) Program Criteria Development Meeting (S)
- 1.3 – Seek funding mechanisms for cancer research (M)
- 1.4 – Explore the establishment of a Firefighter Cancer Research Center of Excellence (S)
- 1.5 – Convene a meeting to identify specific research gaps in current firefighter occupational cancer research efforts (M)

Task #2 Identify potential steps related to prevention efforts, including a discussion of model policies

- 2.1 – Provide awareness and prevention information on firefighter occupational cancer (S)
- 2.2 – Develop a unified branding message related to firefighter occupational cancer (S)
- 2.3 – Develop and distribute a Firefighter Cancer Awareness and Prevention Tool Kit (M)
- 2.4 – Include information on cancer prevention activities in Commission on Fire Accreditation International (CFAI) assessments and in the NFFF's Vulnerability Assessment Program (VAP) (L)
- 2.5 – Engage national fire service conference planners to include occupational cancer in the fire service in the general sessions and other conference events (S)
- 2.6 – Develop a physician's guide to firefighter occupational cancer (M)

Task #3 Identify potential steps to presumptive legislation

- 3.1 – Continue to support firefighter cancer research to strengthen the association between firefighting and occupational cancer (L)
- 3.2 – Strengthen and support promotion of prevention programs (S)
- 3.3 – Provide access to a template and guide on how to file a claim with improved documentation (M)
- 3.4 – Provide resources to assist in filing and streamlining a claim for benefits (M)



Task #4 Identify potential steps for engaging other organizations as partners

4.1 – Identify organizations that can provide specific support and assistance (S)

4.2 – Leverage existing relationships that members of the fire service industry have with identified organizations in Action Item 4.1 (M)

Task #5 Identify potential steps to inclusion/recognition of cancer within Line-of-Duty death criteria

5.1 – Introduce a CFSI National Advisory Council (NAC) Resolution regarding occupational cancer in firefighters (S)

5.2 – Identify potential supporters and non-supporters (M)

5.3 – Use the Zadroga Act as an example of Federal legislation that recognizes firefighter cancer as an occupational disease and has a compensation process for paying benefits related to firefighter cancer (S)

5.4 – Identify and quantify the financial impact of firefighter cancer inclusion in PSOB benefits, including information on cost-saving that would result from prevention (M)

Task #6 Identify any next steps for the Steering Committee—documentation—future meetings?

6.1 – Continue the work of the Steering Committee and of the Fire Service Occupational Cancer Alliance (S)

At the conclusion of the meeting, the Steering Committee affirmed the name “Fire Service Occupational Cancer Alliance” (FSOCA) for the group from the January 2015 meeting. It was recommended that the Fire Service Occupational Cancer Alliance meet as soon as possible, contingent upon funding and other scheduling issues. The following items were referred to the Alliance for consideration in the next meeting:

- A summary of the action items of the May Steering Committee Meeting;
- Discussion and identification of specific gaps in past, current, and planned research on firefighter occupational cancer (Action Item 1.5);
- Discussion on unified branding efforts (Action Item 2.2);
- Discussion on identifying entities and organizations that will likely support or oppose Public Safety Officers’ Benefits program changes to include occupational cancer (Action Item 5.2);
- Include discussion of emerging issues; and
- Discussion of any issues that surface related to firefighter occupational cancer in the time between this meeting and the next meeting of the Fire Service Occupational Cancer Alliance.

The May 2015 meeting report and complete action plan are available at:
<http://www.everyonegoeshome.com/wp-content/uploads/sites/2/2016/03/Cancer-Steering-Committee-May-2015-Action-Plan.pdf>



Fire Service Occupational Cancer Alliance Meeting (October 2015)

October 21-23, 2015, the entire body of the FSOCA met in Arlington, Virginia. Chief Dennis Compton again facilitated the meeting. Bill Troup, Fire Program Specialist for the U.S. Fire Administration, welcomed the group on behalf of U.S. Fire Administrator, remarking on the depth of the talent pool present in the room. A complete list of attendees is available in Appendix A.

After introductions, Chief Compton gave a brief summary of the May meeting of the FSOCA Steering Committee, and remarked that it was a priority of the Steering Committee to reconvene the entire body. He also thanked meeting sponsors Brad Pitzl, President and General Manager of Plymovent, and John Granby Vice President of Government Relations for LION, who also serves as Chair of the NFFF Partner Council, formerly known as the NFFF Corporate Advisory Committee. Additional funding for this meeting was provided by the FEMA-DHS Assistance to Firefighters Fire Prevention & Safety grant program.

Members of the Steering Committee presented the findings of the May meeting to the group. Below is a summary of the presentations:

Review of cancer research and funding mechanisms

Chief Kara Kalkbrenner of the Phoenix (AZ) Fire Department provided an overview of the January 2015 FSOCA and May 2015 Steering Committee meetings in regards to cancer research needs and funding mechanisms for future research. The objectives at the January meeting included determining:

- What science tells us about firefighter cancer;
- What we think we know, but needs further research; and
- Address whether any populations are being left behind or not being studied.

The outcomes of that meeting informed the discussion in May, when tasks were identified with recommendations for potential action steps, organizational support, and time frames for completion of the tasks. Chief Kalkbrenner explained the action items related to research and funding laid out at the Steering Committee meeting in Phoenix.

Action Item 1: Identify potential steps related to Research Gaps & Funding

Action Item 1.1 (short term)

- Convene the third Research Agenda Symposium

Action Item 1.2 (short term)

- Discuss cancer research at the next Assistance to Firefighters Grant (AFG) program criteria annual development meeting
- Consider modifying and developing criteria for grant guidance at the meeting

Action Item 1.3 (medium term)

- Seek funding mechanisms for cancer research in addition to funds provided by AFG
- Organizational support from CFSI and other major fire service organizations

Action Item 1.4 (short term)

- Explore establishing a "Firefighter Cancer Research Center of Excellence"
- Help coordinate and prioritize research about firefighter occupational cancer



- The center should be managed by a fire service or academic research organization

Action Item 1.5 (medium term)

- Convene a meeting to identify research gaps in current firefighter occupational cancer research efforts

Many of the action items established by the Steering Committee were scheduled for more detailed discussions during the breakout sessions scheduled for that afternoon. Chief Kalkbrenner also noted that other action items were in the planning stages, to be undertaken by the NFFF or other organizations.

Progress since January and May 2015 meetings related to research and funding includes:

- The third National Fire Service Research Symposium was planned for November 16-18, 2015 in Arlington, Virginia.
- Other funding sources are being considered such as the Assistance to Firefighters Grant Program (AFG), U.S. Department of Labor, Occupational Safety and Health Administration, U.S. Department of Health and Human Services grant funding, private foundations, and others.
- FEMA has closed another AFG research grant cycle, and new research projects are underway.
- University of Arizona's Jeff Burgess received a \$1,500,000 AFG grant for a cancer research project. Working closely with the Tucson Fire Department, the UA research team will evaluate exposure to carcinogens throughout the work shift, measure biomarkers of carcinogenic effect, and test the effectiveness of interventions to reduce carcinogen exposure.
- The University of Illinois also received funding for an exposure-related project.
- The action item to address research gaps was to be discussed during this meeting.
- The CFSI National Advisory Committee passed a resolution in support of the reauthorization of the Zadroga Act and the accompanying funding. (The full text of this resolution is included as Appendix C of this report).

Review of potential steps related to prevention and model policies

Commissioner Joseph Finn of the Boston Fire Department used his own organization as an example of a department being proactive in terms of cancer prevention. Boston Fire Department, in collaboration with Local #718, provided training by the Firefighter Cancer Support Network (FCSN). In the summer of 2015 all 1400 Boston firefighters attended 90-minute classes that cover national firefighter cancer statistics, research findings from academic studies, and FCSN's recommended solutions to reduce their exposure risks.

Members were also provided with a letter from Dr. Michael Hamrock with annual cancer-screening recommendations to take to their primary care physician. Commissioner Finn commended Dr. Michael Hamrock (a member of the Alliance) for his work with the occupational health community. Dr. Hamrock is currently working with health insurers to authorize cancer testing for firefighters. By framing it as "preventive maintenance," it will ultimately save money (and lives) down the line.

Commissioner Finn discussed the award-winning video produced by his department. He said they "wanted to scare people into thinking about their own health and wellness. It's not just the department's job, but everyone's job to be personally accountable." The video has been adopted into recruit training by Boston, and by departments across the country. (A link to the video is in Appendix F: Resources.)

He encouraged adopting a branded message, and stressed that departments should incorporate cancer-related messages in every training. For Boston, the message was accompanied by a new fear factor—this is not the fire service of 30 years ago. Firefighters, in the course of their vocation, are exposed to newer and deadlier toxins. "It's no longer acceptable to be sooty," he related. "Go in and get out clean."

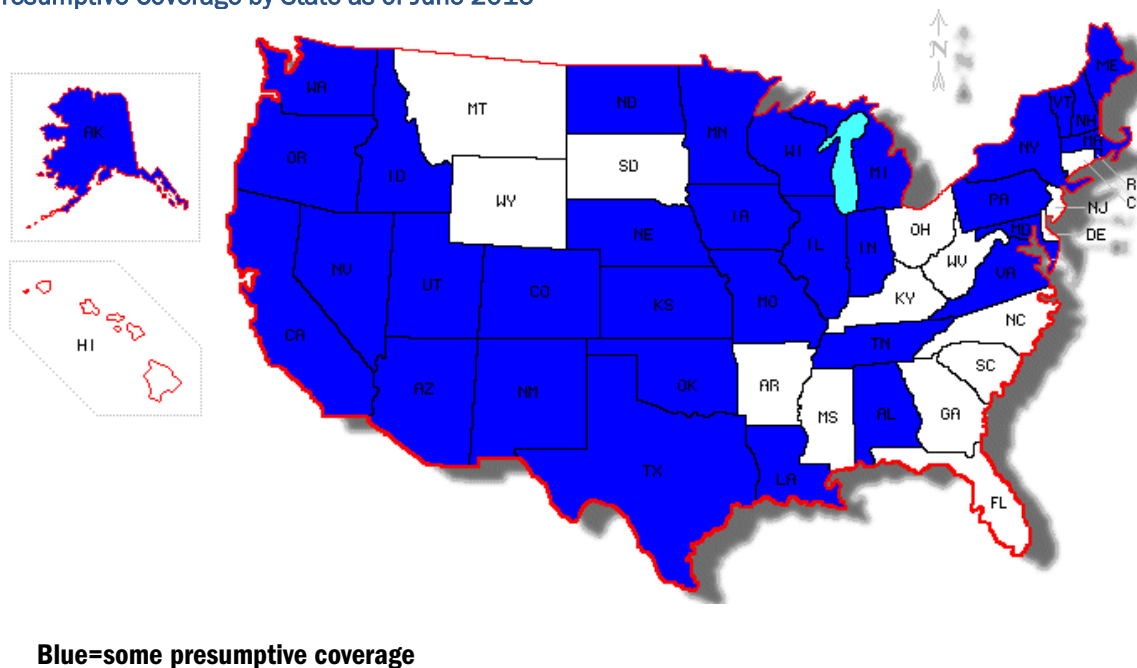


He also emphasized the role of leadership in this—direction has to come from the top. The department is currently producing a second video, emphasizing the role and responsibility of every department member in cancer prevention.

Review of presumptive legislation recommendations

Mr. Pat Morrison, Assistant to the General President for Occupational Health, Safety, and Medicine of the International Association of Fire Fighters, provided an update on firefighter cancer presumptive legislation. He reported that 33 out of 50 states currently have some version of a presumptive law. The laws vary between states, especially in terms of considering the latency of cancer. Presumptive legislation doesn't guarantee a firefighter who develops cancer will be covered by workers' compensation since other factors may have a greater role in causation (such as tobacco use). However, presumptive legislation does remove the burden of proof of causation from the affected firefighter and allows for individual case evaluation. Rebuttable presumption shifts the burden of proof to the employer.

Figure 2. Presumptive Coverage by State as of June 2016



There is a strong need to continue to work toward linking occupational exposure to carcinogens to cancer in firefighters. Exposure to carcinogens and the link to cancer is determined by the International Agency for Research on Cancer (IARC), part of the World Health Organization (WHO). (For more information on IARC, go to <http://www.iarc.fr/en/about/index.php>.) Researchers may determine which types of cancer may be fire-service related through animal studies and human epidemiological studies. This research may glean information from: cancer diagnoses in active or retired firefighters; death certificates or cancer registries; comparisons of rates of cancers in firefighters to non-firefighter comparison groups or less exposed firefighters; and/or similar exposures or firefighter occupation in patients with specific types of cancer. Researchers working to determine causation must determine several factors including:

- Sufficient latency (passage of time from onset of exposure to disease development)
- Agent and route of exposure
- Dose and duration of exposure
- Pattern of organ site excess
- Consistent with animal data (if applicable)



- Consistent with other populations exposed to same agent—for example, is the pattern similar to cancer excesses seen in petroleum-refinery and chemical workers exposed to similar agents, such as PAHs, benzene?

Mr. Morrison stressed the last bulleted item regarding population being a key consideration in designing and interpreting the results of firefighter cancer studies. There have been five major studies of firefighter cancer that may be used to determine increased risk of specific types of cancers. (For more information on these studies, please see Appendix F: Resources). When researchers overlap at least two of these studies, they have determined that there is an increased risk of the following types of cancer in firefighters.

- Lung
- Melanoma
- Mesothelioma
- Multiple Myeloma
- Non-Hodgkin's lymphoma
- Non-melanoma skin cancer
- Prostate
- Rectal
- Stomach
- Bladder and kidney

Review of recommendations related to engaging other organizations

Captain Demond Simmons of Oakland (CA) Fire Department and Southwest Regional Director of the International Association of Black Professional Fire Fighters (IABPFF) greeted the group on behalf of President James Hill and the IABPFF Board of Directors. He began his presentation with a list of organizations to target as potential collaborators:

- Colleges and Universities
- Fire Service Journals
- International Association of Black Professional Firefighters
- International Association of Women in Fire & Emergency Services
- National Association of Hispanic Firefighters
- International Association of Fire Safety Instructors
- National Fire Protection Association
- National Institute of Occupational Safety and Health
- International Association of Fire Chiefs-Volunteer and Combination Officers Section
- International Association of Fire Chiefs-Health, Safety, and Survival Section
- North American Fire Training Directors
- Firefighter Cancer Support Network
- National Volunteer Fire Council

Captain Simmons recommended four themes of collaboration: 1) education/awareness 2) advocacy 3) legislation and 4) research partnerships. The first step of the process is to identify a key contact person. Next, identify what is currently being done in each organization in the realm of research, prevention, and legislation. Then he recommended the integration of resources from the Fire Service Occupational Cancer Alliance with the particular efforts of each organization. Lastly, and most importantly, he recommended identifying metrics to gauge the overall effectiveness of the collaboration efforts.

Review of recommendations for cancer to be included in the line-of-duty death criteria and recognition/inclusion

Division Chief Bryan Frieders of the San Gabriel (CA) Fire Department and Executive Director of the Firefighter Cancer Support Network (FCSN) began his presentation by saying "I haven't seen the fire service change so quickly on an issue in my 25 years." He updated the group on the work of the FCSN, and said that the group will be working on a second White Paper in early 2016. While discussing recommendations for

inclusion, Chief Frieders cited the Zadroga Act as a good example of how the federal government does



embrace cancer as an issue in the fire service.

In terms of PSOB and other benefit inclusion, he warned that we don't want to undermine existing legislation. He also cited the importance of determining potential adversaries and being able to counter their objections will be key to expanding coverage of cancer in both benefits and insurances.

Chief Frieders stated, "we are never going to eradicate cancer [but] through prevention we can minimize risk." He also stressed the importance of creating a central data repository, and of making universal access to the data a priority. In closing, he commended the Alliance "we are changing the fire service."

Next steps recommended by the Steering Committee

Chief Jim Seavey of Cabin John (MD) Fire Department, Board member of both NVFC and IAFC-VCOS, began his presentation by saying "looking at it through volunteer and career eyes, it's amazing to see how far we have come." He gave a detailed overview of current efforts, and gave multiple examples of potential next steps, including:

- Research-close gaps, expand data collection, and improve exposure reporting
- Prevention-identify best practices and educate firefighters about risk reduction
- Diagnosis and treatment-develop materials and resources to support affected firefighters and their physicians
- Legislative efforts-expand coverage of benefits and educate constituency organizations in advocacy efforts
- Partnerships-identify and recruit potential allies beyond the current associations to collaboratively achieve goals
- Marketing and branding-brand efforts, and use social media and other formats to reach every audience

Chief Seavey ended his presentation by showing the video "*Fighting Fires/Fighting Cancer: FASNY members share their stories.*" He reports that cancer diagnoses are increasing among volunteer firefighters, and this video relates the personal testimonials of New York State volunteers and cancer survivors, including FSOCA member Brian McQueen. (A link to this video is available in Appendix F: Resources)

Following the Steering Committee presentations Victor Stagnaro, Director of Fire Service Programs for the NFFF, briefed the group on the work to be accomplished during the breakout sessions. Each of the four groups was tasked with elaborating on the action steps defined during the May 2015 Steering Committee. Assignments were:

Group 1. Branding/Naming/Prevention

Group 2. Research Gaps

Group 3. Potential Partners

Group 4. Supporters and Opponents of Potential PSOB Benefits/Inclusion

He charged the group with "digging deep" in their respective subject matter, and asked that they go above and beyond the work already completed at the January and May meetings. Chief Compton then adjourned the groups to their breakout sessions for the remainder of the day.



Breakout Session Presentations

Group 1. Branding, naming, and prevention

Group 1 was tasked with developing a unified branding message for a campaign related to firefighter occupational cancer, and to outline the action steps to provide awareness and prevention information on firefighter occupational cancer. They selected the tagline:

KNOW Firefighter CANCER **(The price of inaction)**

The dual meaning of “NO” and “KNOW” would be the foundation of the campaign. The overall goals and anticipated outcome of the campaign are to 1) educate 2) prevent 3) reduce and 4) support. Audiences for this effort will include:

- Firefighters
- Chiefs and Administrators
- Elected Officials
- Risk Managers
- General Public
- Industry
- Standard-Making Bodies
- Medical Professionals
- Firefighters’ families
- Special Populations

The group began the work of determining desired outcomes for each audience, tailoring the message, and identifying partners and resources appropriate for the group.

Firefighters

Desired outcomes are:

1. Change behaviors that are risk factors for cancer;
2. Encourage firefighters to take an active role in cancer prevention; and
3. Make cancer prevention everyone’s responsibility.

Using the “KNOW Firefighter CANCER” tagline, messaging will give firefighters tools to understand their risk of occupational cancers; how to protect their families; and how to limit their risk. Also discussed was the importance of protecting firefighters’ families-*How much is your family worth to you?* Additional research data regarding risk to family members will support this approach.

Partners will include departments, and state and national constituency and training organizations. Resources already available or in development include videos (such as Boston Fire Department, NFFF, and IAFF) Dirty Dozen, and FCSN White Paper and materials from NFFF and NVFC. Positioning will be achieved through social media, textbooks, training platforms, and apps. This also has strong potential for company officer level trainings, such as U.S. Fire Administration’s “Coffee Break Trainings” or Wildland Fire Lessons Learned Center’s “6 Minutes for Safety.”



Chiefs/Administrators

Desired outcomes include:

1. Educate administrators about occupational cancers;
2. Create accountability for cancer prevention at the administrative level;
3. Give chiefs and administrators the tools to advocate for cancer prevention;
4. Make cancer prevention part of the department culture; and
5. Educate department leaders in supporting members after a cancer diagnosis.

Messaging will be tailored to the audience, demonstrating to organization leaders that it is their responsibility to take the lead on cancer prevention efforts. It will also give chiefs the tools to demonstrate to municipal leaders that cancer prevention is cost effective. Partners will include the IAFC, IAFC-Metro Chiefs section, IAFC-VCOS, municipal leadership. IAFF will be particularly important here, in terms of supporting department leadership. The “Cancer Tool Kit” (under development) and particularly the dissemination of data will be key resources for this group; positioning will be achieved through trade shows, state chiefs’ association conferences, and trade publications.

Elected Officials/Risk Managers

The desired outcome for this group is to use data to show that the loss of money associated with firefighter cancer can be assuaged by mitigation dollars. One idea that was presented to the group was to develop a postcard of a firefighter in dirty gear on one side, and a firefighter in cancer care on the other, with a tagline of “The Price of Cancer.”

Messaging will be derived through demonstration of return on investment and political capital. Partners will include IAFF, National League of Cities, International City/County Management Association, National Association of Counties and insurance entities. Resources for use with this group include data, particularly OSHA/NIOSH, and executive summaries of research papers. This group will be reached through industry conferences and publications.

Medical Professionals

Marketing toward this constituency will be targeted toward educating physicians about the increased risk of cancer in firefighters. Most firefighters do not have access to regular occupational screenings. Therefore, it is critical that we reach the medical community, and enlist their participation. Messaging should be two-fold: 1) we have the data to prove the risk, and 2) all firefighters need occupational screening. To reach this group, we need to work with occupational medical associations, primary care physicians’ associations, the American Cancer Society, and insurance networks. Available resources include existing data and research papers, and FCSN White Papers. Dr. Michael Hamrock prepared a letter for physicians caring for members of Boston (MA) Fire Department. This document, which outlines recommended screenings, should be disseminated widely throughout the fire service. Efforts to educate medical professionals can be channeled through articles in journals, presentations at medical conferences, and advocacy efforts to medical associations.

Additional work is needed to develop marketing toward medical education groups, standards-making bodies, and most of all the public. Educating the public and enlisting their support will be critical to advocacy efforts, in terms of additional funding for prevention and care. The group agreed that this was a start in developing a unified marketing approach, but professional expertise is needed in directing this effort.



Group 2. Research gaps

The Research Gaps group was tasked with identifying research that is not currently being conducted, and to provide a sense of priorities for this research. This list would serve to inform the Occupational Diseases of Firefighting at the 2015 National Fire Service Research Agenda Symposium, which would be held the following month. The group formulated the following recommendations:

Cancer registry

The group prioritized the establishment of a national cancer registry for firefighter cancer. The registry would provide a central location for the tracking of firefighter cancer and provide information for researchers. The International Association of Fire Fighters (IAFF) will lead this effort. Possible paths for the establishment of the registry include Congressional funding and partnerships with existing cancer registries, NIOSH, and NIH.

Understudied populations

Current firefighter cancer research efforts may not include adequate representation within the studies from some fire service groups or populations. The group recommended the inclusion of these groups in future scientific studies. Previous work by the Fire Service Occupational Cancer Alliance identified the following groups as underrepresented in current firefighter cancer studies: volunteer firefighters, firefighters of color, wildland firefighters, and female firefighters.

Sources and mechanisms of cancer

The combined toxicity of smoke, liquids, and particulates that are encountered by firefighters in the course of their work is largely unknown. The toxicity of materials consumed in fires is known, but little data exists about the combination of these toxins in a fire.

The group recommended research to identify the most toxic mixtures in order to prioritize prevention efforts; develop a better understanding of cancer mechanisms to support work-relatedness of cancer (individual legal, IARC); and identification of specific cancer mechanisms to guide future studies in order to limit/modify these mechanisms.

Effectiveness of prevention, interventions, and health & wellness programs; secondary exposures

The group also recommended research to identify successful cancer prevention and intervention programs that mitigate a firefighter's exposure and risk, especially early interventions.

The group recommended research on assessing the efficacy of fire service health and wellness programs in reducing cancer risk.

Finally, the group recommended research on secondary contamination exposures to firefighters including exposures associated with apparatus, uniforms, personal protective equipment (PPE), personal vehicles, and in the firefighter's home.

Personal protective equipment effectiveness

The group recommended work to assess the effectiveness of firefighter PPE in the prevention of firefighter exposure to cancer risk. Discussions included assessments of the adequacy of respiratory protection, skin absorption through PPE, decontamination, and PPE maintenance programs.



Group 3. Additional partners

Group 3 was tasked with identifying organizations that may be relied upon to provide support for efforts of the Fire Service Occupational Cancer Alliance. They asked that the NFFF take the lead in coordinating this, and that approaching potential partners be carried out in a structured and planned way.

A well-crafted message is an essential part of outreach, and it was recommended that the NFFF develop a collaborative partnership/marketing proposal as part of the FSOCA Tool Kit. Prior to reaching out to any organization, materials need to be developed to assist advocates in clearly and quickly articulating what we need and how a partnership can benefit targeted organization. The group's recommendations for potential additional partners are:

American Cancer Society

Josh Burnheimer of Scott Safety is a member of his regional board of directors of the American Cancer Society, and it was recommended that he be asked to take the lead at the national level. Chief Ronald Siarnicki of the NFFF was suggested as an alternate.

The ACS could support the Alliance through their research and data collection capabilities, as well as providing educational materials. They may also potentially be able to provide some funding for occupation specific research efforts. In exchange, the Alliance can offer publicity and awareness raising opportunities, capitalizing on the positive image of the American fire service, as well as potential partnerships. An idea for a possible prevention campaign was "If you prevent a fire, you can prevent an exposure." All of the major fire service organizations could benefit from this partnership.

Sports/entertainment industry

The sports and entertainment industries provide opportunities for local and national partnerships. Fire chiefs and/or union leadership can reach out to sports teams and celebrities in their areas. National leaders can reach out to equipment manufacturers.

These partnerships present publicity and public service announcement opportunities, in the vein of firefighters as "occupational/tactical athletes." They may also be sources of funding, and can use social media and websites to disseminate information regarding firefighter cancer. They are also able to share information at the local level, at sporting events, music concerts, etc. In exchange, these partnerships offer the sports and entertainment industries an opportunity to demonstrate their philanthropy in their communities.

Organizations that have successfully cultivated these relationships (such as Boston (MA) Fire Department) can be used as a model by other departments. A collaborative partnership/marketing proposal should be included in the FSOCA Tool Kit.

Pharmaceutical industry

Partnerships with the major pharmaceutical companies potentially offer sources for funding for research/prevention programs; data sharing; participation in clinical trial for firefighters; and product donations, if appropriate. In exchange, the fire service can offer clinical trial subjects; the positive image of the American fire service for publicity and public service announcements; and assistance with product marketing.

It was recommended that Pat Morrison from the IAFF, a member of the FSOCA Steering Committee, and other health and safety leaders from the national fire service organizations reach out to major pharmaceutical manufacturers.



Insurance industry

Insurance companies are directly impacted by the increasing rates of cancer among firefighters. It was recommended that the major property/casualty and workmen's compensation insurance companies be approached by peers, labor leaders, or chiefs who are members of the Alliance.

Insurers could potentially aid in the development/dissemination of training materials; provide funding for health/wellness programs and family support programs; and assist in publicity and marketing efforts. They would in turn benefit directly from a fewer cancer-related health claims, and reduced costs. They could also convey a positive image for their efforts through marketing and public service announcements.

Risk management industry

Partnerships with the Risk Management Association, Public Risk Management Association, National League of Cities, and Risk Management Society could potentially offer the fire service the use/analysis of risk management policies and related data; educational tools; prevention materials, and advocacy partnerships. In return, they will benefit from fewer claims; reduced costs (both administrative and litigation); enhanced health/wellness of the first responder work force; and positive marketing opportunities. It is recommended that leaders of the major fire service organizations approach these associations.

Apparatus/equipment industry

It was recommended that Alliance members John Granby (LION), Jen Brust (Honeywell), and Josh Burnheimer (Scott Safety) be asked to take the lead with this group.

Partnering with FAMA/FEMSA will enable the Alliance to advocate for safer products and technology. We can help manufacturers to increase focus on internal research and development; provide financial support/sponsorship of cancer-related research, as well as external conferences and meetings. We can also provide guidance in enhancing safety messages in their advertising and development of educational and training materials. In exchange, manufacturers can benefit from additional opportunities for field-testing products; increased new product marketing opportunities/increased sales volume with existing products; and the positive publicity derived from collaborating on this very important issues.

Non-profit organizations

The National Fire Protection Foundation, NFPA, NFPA Research Foundation, and the Wildland Firefighter Foundation should be asked to partner with the Alliance. These organizations can raise awareness among their constituents; share data/research efforts; partner in education, advocacy, and training; and serve as an information clearinghouse. In exchange, assistance to the Alliance would support their mission, and provide publicity to their efforts. Rita Fahy, Alliance member, was recommended to take the lead with the NFPA and their associated research foundation.

Government agencies

Government agencies, including U. S. Department of Health and Human Services (NIOSH, CDC, NIH), U.S. Department of Homeland Security (FEMA, USFA), U.S. Department of Agriculture (USFS), U.S. Department of Labor (OSHA), U.S. Department of the Interior, U.S. Department of Commerce (NIST), U.S. Department of Justice (ATF), and U.S. Department of Defense could be asked to provide support through research, training, data, recognition, prevention, funding, and education. This would offer agencies visibility and positive publicity, enhancing relationships with the fire service and demonstrating impact of programmatic efforts. They should be engaged through the national fire service organizations, the NFFF, and CFSI.



In closing, the group asked that academic partnerships also be sought, and that partnerships based on opportunities-firefighter deaths or other events, can bring a positive outcome from negative occurrences.

Group 4. Supporters and opponents of potential PSOB benefits/inclusion

Group 4 was asked to explore inclusion of firefighter occupational cancer as a disease covered by the Public Safety Officers' Benefits (PSOB) program, or the recognition of cancer as a firefighter occupational disease under other insurance and other benefit programs. Potential opponents they identified included:

- National League of Cities
- National Association of Counties
- International City/County Managers Association
- DOJ bureaucracy
- Individual members of Congress
- Government watchdog groups
- Insurance industry
- Fire chiefs, commissioners, and administrators

The group also considered potential allies-organizations or groups that are not currently engaged, and/or who need to be engaged in this effort:

- Firefighters
- Fire officers
- The public
- Medical community
- Manufacturers (FAMA/FEMSA)
- Family organizations/survivors' networks
- Academic or other research organizations
- Trade publishers
- Political leaders at every level
- Nutrition and fitness industries
- Media/athletes/celebrities

The group was then asked to develop a strategy to engage potential supporters. They agreed that the first step is to develop a coherent, unified message to be used across all constituencies. This message should answer the questions 1) why is this important? and 2) what is the benefit of getting onboard?

Developing an effective manner to communicate the message to each particular audience will be important. The message should be positive-in the vein of "support challenge." It should also be delivered from the top down, engaging national organizations, then state, then local. CFSI focuses on national-level advocacy, and would provide resources, input, and guidance here.

The group also encouraged involving survivors. There is still some stigma attached to occupational cancers, and it's important for surviving family members to tell their stories. The NFFF has a template for survivor advocacy that would be useful.

Developing a tool kit for advocacy will be critical to this effort. Analogous to the Cancer Tool Kit currently being developed, these materials will be tailored for providing the data and research to make decision-makers understand the issue. Fact sheets, speaking points to counter opposition, a PowerPoint presentation, draft model legislation, research studies, and financials demonstrating the cost/benefit of prevention vs. treatment should be included in the tool kit. It could be made available online, or on a thumb drive.

It will be important to tailor the message for the desired outcome, and to consider whether advocacy should be directed at federal, state, or local levels. Data and statistics should reflect the level of advocacy; for example, when dealing with the state legislature, statistics should reflect that state.



It is particularly critical to develop a strategy to deal with the organizations that will be in opposition. First, what is the goal of the effort-to change minds or stifle dissent? Secondly, determine why organizations are not supporters. It might be a lack of awareness or complacency (it won't happen to us). It might be a perceived notion that it will be too expensive, or that it is a claim against the agency or the government, or event that it is not the role of government to intervene. Legislators may also fail to recognize their responsibility to their constituency OR feel that this legislation is not in the perceived best interest of their constituency.

Arming yourself with the resources and the data to counter the opposition is an important step. Enlisting a survivor or a family survivor in your efforts will also be important. Each of us should be prepared to be an advocate for the alliance, and for the effort to eradicate fire service occupational cancers. As such we should be reaching out to educate every member of the fire service to be an expert on cancers.

Funding the Alliance

Branch Chief Catherine Patterson of the FEMA-DHS Assistance to Firefighters Grant Directorate led a discussion regarding the potential for developing a FEMA Center for Excellence to address fire service occupational disease in general, or cancer in specific. She did state that Centers of Excellence would not be funded in the FY 2015 cycle, but recommended that the Alliance work with constituency organizations to support efforts to address occupational cancers prior to the November 2016 stakeholder meetings.

Ms. Patterson also noted that AFG has the lowest number of returned grants and the highest turndown rate (87%) among all grantors in FEMA. Research-to-Practice continues to be a major focus for the AFG Grant Directorate. While abstracts are housed on the AFG website, the translation piece is still a work in progress. Some of this void will be filled by the FSTAR project. Through an AFG grant, IAFC's FSTAR will "digest" state-of-the science research and translate it into usable information, accessible to fire departments of all types and sizes.

Next steps and the future of the Alliance

At the conclusion of the October meeting of the Fire Service Occupational Cancer Alliance, Chief Compton asked that the group consider the future of the Alliance. He questioned, by show of hands, whether or not the National Fallen Firefighters Foundation should continue to spearhead this effort. Unanimously, the group voiced their support for the NFFF, work done to date, and future leadership of the Alliance.

At that point, Chief Compton asked that all organizations continue their respective work. He encouraged all to maintain the momentum, and to seek funding support for their work as individual groups, or as partnerships. He also verified that the NFFF would continue to identify and explore organizational options, and seek a funding mechanism to support the work of the Alliance for the next three years and into the future.

In closing, Chief Compton thanked the NFFF staff for their efforts. He also asked that the work of the Alliance during 2015 be consolidated into a single document, including an updated action plan. As a result, this report is a comprehensive document, including all work of the Alliance to date.



National Fire Service Research Agenda Symposium (November 2015)

The National Fallen Firefighters Foundation hosted the 2015 National Fire Service Research Agenda Symposium in November of last year to develop a third iteration of the Fire Service Research Agenda. More than 100 of the nation's fire service subject matter experts participated; almost a quarter of attendees were also members of the Fire Service Occupational Cancer Alliance.

The National Fire Service Research Agenda is an assembly of individual recommendations for research projects that span a wide range of subjects. These recommendations are intended to address the primary needs and priorities of the fire service. The Agenda is used as a screening tool by grantors (including DHS-FEMA's Assistance to Firefighters grant program) to determine where research funds should be allocated to keep firefighters safe, fit, healthy, and effective.

A review of previous versions of the Research Agenda indicates the emergence of occupational cancers as a concern for the fire service. Cancer was not addressed in the 2005 Agenda and in the 2011 Agenda cancer was included as part of three recommendations:

- **Health and disease related to exposures:** There is a need for continued research on fire service exposures and their relationship to the cancer, cardiovascular disease, and injuries.
- **Hazardous exposures among women firefighters and their unique health outcomes** Research is needed to further characterize occupational risk factors and disease outcomes specific to women firefighters. In particular, focus should be paid to reproductive health, maternal health, cardiovascular risk factors, injuries and cancer
- **Adaptation of emerging technologies and research in Personal Protective Equipment design, production and use** There are several ongoing and emerging PPE issues that need further study [including] long-term health effects of contaminated gear, including exposure-related cancers.

By contrast, cancer was a consistent theme at the 2015 Research Agenda Symposium. Participants were divided into seven domains; one of which was Occupational Diseases of Firefighting. This group was tasked with developing recommendations related to cancer, as well as cardiovascular disease and other conditions that impact the fire service. Once the group identified specific research topics, they were asked to prioritize each of their recommendations.

The recommendations developed by the Research Gaps breakout group at the October 2015 Fire Service Occupational Cancer Alliance meeting were provided to members of the Occupation Diseases of Firefighting group to help guide the discussion related to cancer. They included recommendations related to:

- Developing a national cancer registry
- Identifying understudied populations
- Identifying sources and mechanisms of cancer
- Effectiveness of prevention, interventions, and health & wellness programs
- Effects of secondary exposures
- Personal Protective Equipment effectiveness

In preparing the final Research Agenda, it was determined that the recommendations should be organized in a manner that expresses the interdisciplinary nature of research in the fire service. This was intended to demonstrate how research directed toward a specific subject could require input from multiple areas, and could in turn potentially impact multiple areas. The recommendations were then organized into three predominant themes defined as:

- Data collection and data analysis projects;
- Problem or program analysis and evaluation projects; and



- Projects that could be described as research to practice initiatives.

The final report of the Symposium was released in January 2016. In the final Research Agenda, 16 of the 54 recommendations were related to fire service occupational cancers. The recommendations are listed below and the Research Agenda recommendation number is referenced in the parentheses after the recommendation.

Theme A: Data Collection and Data Analysis Projects

High Priority Recommendations

- Conduct research directed toward identifying those individuals within the fire service who are at a higher risk for specific occupational injury/illness/disease. (Recommendation 1)
- Develop a unified national database with common definitions on fire service fatalities, injuries and occupational illnesses. (Recommendation 4)
- Improve local data collection in order to positively impact efficient service delivery, professional development and organizational health. (Recommendation 8)

Medium Priority Recommendations

- Determine the incidence and frequency of occupational diseases/illness/injury/conditions in underrepresented groups and those with unique exposures. (Recommendation 9)
- Research total worker health of the wildland firefighter population to improve health and wellness. (Recommendation 11)

Theme B: Problem or Program Analysis and Evaluation Projects

High Priority Recommendations

- Conduct a cost/benefit analysis of investing in fire department occupational health and safety programs, including identification of best practices and methods to institute such programs. (Recommendation 15)
- Conduct research on enhanced dermal protection provided by firefighter structural protective clothing, particularly as it relates to reducing exposures to known and suspected carcinogens. (Recommendation 19)
- Continue research on firefighter health, injury and diseases related to chronic and repeated exposures to the risks of emergency incidents and the fire service work environment. The research should encompass all disciplines including wildland and wildland-urban interface. (Recommendation 22)
- Continue research on firefighter health, injury and diseases related to the risks of acute exposures that may result from emergency incidents. (Recommendation 23)
- Determine the efficacy/effectiveness of interventions/programs/systems designed to decrease disease/exposure/injury/death and increase medical evaluations, occupational health and surveillance. The research should include under-researched populations within the fire service and include a focus on reproductive, maternal and child health issues, cardiovascular risk factors, injuries and cancer. (Recommendation 24)
- Identify respiratory contaminants and determine the potential adverse health outcomes associated with wildland and wildland-urban interface fire operations. Also, determine the adequate respiratory protection for wildland firefighters. (Recommendation 25)



Medium Priority Recommendations

- Assess the impact of current fire dynamics research on the health of fire investigators. (Recommendation 30)
- Conduct research on cleaning methods for firefighter protective clothing, including potential impacts on the protective properties and useful life of the clothing, and determining effectiveness of removal of suspected carcinogens and other contaminants. (Recommendation 33)
- Conduct research on the translation, dissemination and messaging of current knowledge and best practices related to health and wellness programs, including physical fitness, health maintenance, nutrition and annual medical evaluations. (Recommendation 34)
- Determine the appropriate level of respiratory protection for use during overhaul operations including the use of air monitoring instruments to measure thresholds. (Recommendation 35)
- Determine the most effective implementation methods to institute occupational health programs. (Recommendation 36)

Theme C: Research to Practice Projects

None.



Additional Milestones

Reauthorization of the Zadroga Act

On December 18, 2015, the \$8.1 billion James Zadroga 9/11 Health and Compensation Reauthorization Act passed as an attachment to the omnibus government funding and tax-break bill. The 9/11 provision will spend \$3.5 billion on health and extend the World Trade Center Health Program until 2090. It will also spend \$4.6 billion to extend the Victims Compensation Fund for five years and make up for a significant shortfall in the 9/11 bill that passed five years ago.

The World Trade Center Health Program monitors and provides care for responders and survivors of the terrorist attacks at the World Trade Centers and related sites in New York City, the Pentagon, and Shanksville, PA.

CFSI Resolution to address fire service occupational cancers

On December 16, 2015, CFSI unanimously passed a resolution in support of federal legislation, funding and policies to address firefighter occupational cancer. The resolution (Action Item 5.1 and Appendix C) was supported by the major national constituency organizations and CFSI. It specifically articulates support for:

- An inclusive national statistical cancer reporting system for firefighters,
- Funding for research to reduce the instances of occupational cancer to firefighters and the development of more effective treatments,
- Public recognition of firefighter line-of-duty deaths resulting from certain cancers identified through scientific research,
- Federal presumptive line-of-duty death benefits, including the Public Safety Officers' Benefits (PSOB) program, that cover firefighters who die from certain cancers identified through scientific research;
- Implementation of the work of the Fire Service Occupational Cancer Alliance as they continue their unified efforts to address myriad issues relating to cancer in firefighters.

National Firefighter Cancer Registry

On February 26, 2016 U.S. Representatives Bill Pascrell (D-NJ) and Richard Hanna (R-NY) introduced a bill to create a national cancer registry for firefighters. The Firefighter Cancer Registry Act is supported by NVFC, IAFC, IAFF, CFSI, IFSTA, NFFF, and many state and local fire service organizations.

The Firefighter Cancer Registry Act (H.R. 4625) would establish a specialized national cancer registry to be managed by the Centers for Disease Control and Prevention (CDC). The registry would improve collection capabilities and activities related to the nationwide monitoring of cancer diagnoses of career and volunteer firefighters. The national cancer registry would:

- Store and consolidate epidemiological information submitted by healthcare professionals related to cancer incidence among firefighters.
- Make anonymous data available to public health researchers to provide them with robust and comprehensive datasets to expand groundbreaking research.
- Improve our understanding of cancer incidence as the registry grows, which could potentially lead to the development of advanced safety protocols and safeguards.
- Increase collaboration between the CDC and epidemiologists, public health experts, clinicians and firefighters through regular and consistent consultations to improve the effectiveness and accuracy of the registry.

H.R. 4625 has been referred to the House Committee on Energy and Commerce for review.



FSOCA Steering Committee Meeting (April 2016)

The Steering Committee met on April 8, 2016 to review and update the FSOCA action plan. Chief Dennis Compton facilitated the meeting. A complete list of attendees is available in Appendix B.

After a review of the October 2015 meeting, members of the Steering Committee provided updates from the organizations and fire departments they represent. Boston Fire Commissioner Finn previewed the second cancer awareness video from his department. This outstanding video can be viewed at <https://www.youtube.com/watch?v=bXd5sb6fWNM&feature=youtu.be>. The goal of this video was to provide firefighters with actionable items they can do to help decrease their exposure to carcinogens. IAFF's Pat Morrison reported that there is much interest and support for a national cancer registry to coordinate the existing state registries. Dr. Kenny Fent reported that the preliminary results of the cardiovascular and chemical exposure study conducted by the Illinois Fire Service Institute Research Center is available at https://www.fsi.illinois.edu/documents/research/CardioChemRisksModernFF_InterimReport2016.pdf. Fire department representatives reported on activities including clean hood programs, post-fire wipe programs, recruit training and other cancer awareness and prevention initiatives.

Action Plan Status Update April 2016

Members of the Steering Committee reviewed each action item and provided a status update which is listed in the following pages. The timeframe recommendations are defined as:

- Short term-up to 12 months;
- Medium term-up to 24 months; and
- Long term-up to 36 months.

1. Identify potential steps related to research gaps and funding

Action Item	Time frame	Background	Organizational Support	April 2016 Status
1.1 – Convene the 3rd National Fire Service Research Agenda Symposium	Short term	The 1st Research Agenda Symposium was held in 2005 and the 2 nd Research Agenda Symposium was held in 2011. The 3 rd Symposium would include deliberations on all fire service research including firefighter occupational cancer.	The NFFF has coordinated and staffed the first two symposia, and is willing to continue in this role working with national fire service organizations.	The 2015 Research Agenda was held in November in Virginia. The breakout group Occupational Diseases of Firefighting was provided with the recommendations produced by from the Research Gaps group at the October 2015 meeting. The 2015 Fire Service Research Agenda was released in January 2016; 16/54 final recommendations have impact on fire service occupational cancers.



1.2 – Discuss cancer research at the next Assistance to Firefighters Grant (AFG) Program Criteria Development Meeting	Short term	The AFG Program convenes an annual meeting to modify and develop criteria for the grant guidance. It would be valuable to provide information to this meeting on the research priorities on occupational cancer.	Criteria development meetings are typically attended by representatives from nine national fire service organizations.	Participants in the November 2015 AFG criteria development meeting articulated the need to prioritize cancer research and prevention efforts. Efforts will continue to advance firefighter cancer as a priority.
1.3 – Seek funding mechanisms for cancer research	Medium term	It is important to seek and retain funding for firefighter occupational cancer research in addition to the funds provided by AFG.	CFSI and other major fire service organizations.	Finding additional research funding for occupational research is an ongoing concern, and has been established as a priority by Alliance members.
1.4 – Explore the establishment of a Firefighter Cancer Research Center of Excellence	Short term	The goal of the Firefighter Cancer Research Center of Excellence would be to coordinate and prioritize research related to firefighter occupational cancer. The Center would be a clearinghouse for research. This Center would promote efficiency by assuring that all research adds to the body of knowledge on firefighter cancer.	The Center could be coordinated by a fire service organization or by an academic research institution and could collaborate with IAFC’s Researchers Creating Usable Emergency Solutions (RESCUES), major fire service organizations and research entities.	Catherine Patterson, FEMA-DHS Director led a discussion at the October 2015 meeting regarding the potential for developing a FEMA Center of Excellence (COE) to address fire service occupational disease in general, or cancer in specific. She stated that no COEs would be funded in the FY 2015 cycle, but recommended that the Alliance reach out to constituency organizations to support efforts to address occupational cancers prior to annual stakeholder meetings.
1.5 – Convene a meeting to identify specific research gaps in current firefighter occupational cancer research efforts	Medium term	Gaps in the current research include methodologies of exposure-related data; prevention methodology; underrepresented populations; research-to-practice methodologies; and causation between firefighting and cancer.	The NFFF could coordinate a meeting of the Fire Service Occupational Alliance comprised of representatives from fire service organizations, researchers, governmental partners and industry partners.	This was addressed at the October 2015 Alliance meeting. Information was provided to the “Occupational Diseases of Firefighting” group at the 2015 Fire Service Research Agenda Symposium and used in the development and prioritization of topics in the 2015 Agenda. Efforts will include a specific emphasis on wildland firefighters.



2. Identify potential steps related to prevention efforts, including a discussion of model policies

Action Item	Time frame	Background	Organizational Support	April 2016 Status
2.1 – Provide awareness and prevention information on firefighter occupational cancer	Short term	It was recommended to provide awareness and prevention information to firefighters and to strategize on the creation of new information. Steps include incorporating cancer prevention and research information into IFSTA manuals and IAFF on-line programs. FCSN materials can be distributed more widely and the FCSN White Paper can be included as required reading for promotional exams. Videos on firefighter cancer developed by Boston, San Antonio, and San Francisco fire departments can be distributed. Information should be disseminated on protection of the firefighter’s family.	Groups that will likely be involved include IAFF, International Fire Service Training Association-Fire Protection Publications (IFSTA-FPP), FCSN, IABPFF and other fire service organizations.	This item was addressed in depth by the Branding/ Naming/Prevention group at the October 2015 meeting, and their recommendations are included in this report.
2.2 – Develop a unified branding message related to firefighter occupational cancer	Short term	Develop and disseminate a campaign related to firefighter occupational cancer-related issues. The effort may be similar to successful campaigns such as breast cancer awareness and the Everyone Goes Home® (EGH) program. Ideas developed at the meeting include kNOw Firefighter Cancer, KNOW Firefighter CANCER , Clean Up Firefighter Cancer, #Alarm4Cancer, Suppress Firefighter Cancer, and Extinguish Firefighter Cancer.	The Steering Committee referred this item to the agenda for the next meeting of the Fire Service Occupational Cancer Alliance.	This item was addressed by the Branding/Naming /Prevention group at the October 2015 meeting. Their recommendation is that KNOW Firefighter CANCER be used as the tagline for marketing purposes. They also suggested that the approach be tiered, to meet every constituency group at their own level, and that a professional firm be sought to develop the marketing campaign.



<p>2.3 – Develop and distribute a Firefighter Cancer Awareness and Prevention Electronic Tool Kit</p>	<p>Medium term</p>	<p>An electronic tool kit of firefighter cancer awareness and prevention information should be created and modeled after the Fire Service-Based EMS Electronic Tool Kit (www.fireserviceems.com). The firefighter cancer tool kit can include links to educational materials, research information, talking points, model curriculum, alarm symptom checklist, presentation templates, fire station evaluations forms and other information. The tool kit could also include sections specific for firefighter recruits, company officers, command officers, and others. The tool kit should be mobile-friendly.</p>	<p>Similar to the Fire Service-Based EMS Electronic Kit, the creation and distribution of the Cancer Awareness and Prevention Tool Kit would be a collaborative effort involving many major fire service organizations, industry partners and cancer-related organization such as the American Cancer Society.</p>	<p>This was discussed at the April 2016 Steering Committee meeting. The group agreed to move forward with this project and supported the NFFF including it as a project for the NFFF Affiliate Organization that is being developed.</p> <p>NFFF will seek funding for this project.</p>
<p>2.4 – Include information on cancer prevention activities in Commission on Fire Accreditation International (CFAI) assessments and in the NFFF’s Vulnerability Assessment Program.</p>	<p>Long term</p>	<p>Seek to include information on firefighter cancer prevention as a part of CFAI accreditation and as a part of the VAP.</p>	<p>CFAI manages the fire department assessment process and NFFF manages the VAP. Other fire service organizations’ assistance would be needed to support this action item.</p>	<p>Dr. JoEllen Kelly of the NFFF is coordinating a build-out on the VAP survey, due Fall 2016. Efforts to include cancer prevention activities in accreditation will be undertaken.</p> <p>Pat Morrison is working with Dr. Lori Moore-Merrell (CFAI Board Member) at the IAFF to determine if and how to proceed with the CFAI.</p>
<p>2.5 – Engage national fire service conferences to include occupational cancer in the fire service in the general sessions and other events.</p>	<p>Short term</p>	<p>A letter from the Fire Service Occupational Cancer Alliance should be sent to the national fire service conference planners requesting occupational cancer in the fire service to be included in the general sessions of their conferences.</p>	<p>The letter would be co-signed by the members of the Fire Service Occupational Cancer Alliance representing major fire service organizations and other industry partners.</p>	<p>Chief Ron Siarnicki presented at the International Fire Service Journal of Leadership and Management Research Symposium in July 2015. It is recommended that a Master Calendar be developed for the Alliance, and that staff support be assigned to this effort. Chief Dennis Compton will moderate a panel</p>



				discussion regarding fire service occupational cancers at the May 2016 CFSI Seminar. Alliance members Pat Morrison, Ron Siarnicki, and Jimmy Seavey are the panelists. (The related proposal is Appendix E of this document). Cancer related topics should be included in conference general sessions rather than only in workshops.
2.6 - Develop and distribute a physician's guide to firefighter occupational cancer	Medium term	Since most firefighters go to a general physician rather than an occupational medical doctor, it would be beneficial to create a document that firefighters can provide to their own doctors. The document could include information on the current research available on the link between firefighters and cancer, the importance of getting a baseline chest x-ray, and sources of additional information.	The Boston Fire Department has developed a document that could be used as a foundation for this action item. NIOSH could also provide support.	Partner organizations are in the process of aligning their research efforts in the field of occupational medicine. With input from the Alliance, current plans to produce material for physicians on this topic would be given a high priority.



3. Identify potential steps to presumptive legislation

Action Item	Time frame	Background	Organizational Support	April 2016 Status
3.1 – Continue to support firefighter cancer research to strengthen the association between firefighting and occupational cancer	Long term	38/50 states currently have a version of a presumptive law. There is a strong need to continue to refine firefighter occupational cancer research to discern links between occupational exposures and the development of cancer in firefighters. The latency of cancer also needs to be considered with presumptive laws.	IAFF has led the fire service in presumptive law advocacy. NVFC has begun to get more involved in this issue.	This is an ongoing effort spearheaded by the IAFF and remains a priority for the Alliance. The 2015 Fire Service Research Agenda also addresses this as a priority.
3.2 – Strengthen and support promotion of prevention programs	Short term	Encourage firefighters to take steps immediately that will limit their occupational exposure. For example, smoking cessation programs and smoking prohibitions may assist in the adoption of presumptive cancer legislation. Encourage firefighters to take other steps that will improve their overall health and limit exposure – activities such as healthy eating, SCBA use, showering after a fire exposure, and hood exchange programs that may not be directly related to legislation but may contribute to the firefighter’s health and reduce the incidence of occupational cancer.	Major fire service organizations.	All organizations in the Alliance are actively promoting cancer prevention and plan to continue those efforts.
3.3 – Provide access to a template and guide on how to file a claim with improved documentation	Medium term	A firefighter with a cancer diagnosis may be unfamiliar with the claims process and the importance of documentation in the claims process. The development of a guide or template for claim	Fire Service Occupational Cancer Alliance representatives	This item was discussed at the April 2016 Steering Committee meeting, and it was determined that this would be included as part of the Tool Kit.



		submission would provide the firefighter and his or her family with information about the claims process and examples of proper claim documentation. This material may be included in the tool kit mentioned in Action Item 2.3.		
3.4 – Provide resources to assist in filing and streamlining a claim for benefits	Medium term	Provide resources to assist firefighters through the claims process. Local, regional, state, or national firefighter organizations may provide access to or referrals to works compensation lawyers. Assistance may also be provided by others with experience in the process or by trained peers. This material may be included in the tool kit mentioned in Action Item 2.3.	Fire Service Occupational Cancer Alliance representatives	This item was discussed at the April 2016 Steering Committee, and will be addressed as part of the Tool Kit. Existing resources from partner organizations will be included.
3.5 – Research financial impact of cancer presumptive laws on workers’ compensation insurance rates and disability pension costs	Long term	Provide reliable data to combat perceived inaccuracies and misconceptions about the costs to organizations for workers’ compensation and disability pensions related to firefighter cancer.	Fire Service Occupational Cancer Alliance representatives	This item was added at the April 2016 meeting.
3.6 – Develop and provide exemplary legislation language for workers’ compensation and presumptive disability pensions	Long term	Provide sample legislation for fire departments to use in advocacy efforts on the state level.	Fire Service Occupational Cancer Alliance representatives	This item was added at the April 2016 meeting.



4. Identify potential steps for engaging other organizations as partners

Action Item	Time frame	Background	Organizational Support	April 2016 Status
4.1 – Identify organizations that can provide specific support and assistance	Short term	A number of organizations (fire service and non-fire service) and industry partners were identified as potentially providing support and assistance in this action plan. These organizations include those in the medical, social, and insurance businesses as well as organizations with an interest and presence in the fire service such as fire equipment and fire apparatus manufacturers.	The Fire Service Occupational Cancer Alliance would need to strategize on a organized approach to reaching out to these entities.	This was discussed at length by the Potential Partners group at the October 2015 meeting. A list was compiled and included in this report. The group also recommended that the NFFF take the lead on this, develop the approach, and compile a Tool Kit of materials and resources for working with partners.
4.2 – Leverage existing relationships that members of the fire service industry have with identified organizations in Action Item 4.1	Medium term	Many times, a request for help will be more favorably looked upon if it comes from someone known to the organization. Firefighters, fire service organizations, and others with an interest in the fire service can seek support for the fight against cancer from organizations with which they have an established relationship.	Once the Fire Service Occupational Cancer Alliance has strategized on the specific support and assistance needed from other entities, then the organizational support can be determined.	This Potential Partners group at the October 2015 meeting recommended that Alliance members act as the contact within their own organizations. They also identified individuals to take the lead with different constituency groups. This is covered in the meeting report.



5. Identify potential steps to inclusion/recognition of cancer within Line-of-Duty death criteria

Action Item	Time frame	Background	Organizational Support	April 2016 Status
5.1 – Introduce a CFSI National Advisory Committee (NAC) Resolution regarding occupational cancer in firefighters	Short term	At the December 2015 CFSI NAC meeting, it was recommended to introduce a resolution in support of Federal LODD coverage for firefighter cancer deaths, inclusive statistical reporting, and public recognition of firefighter LODDs resulting from cancer. The resolution needs to be careful not to damage any existing cancer presumption benefits.	Potentially all NAC member organizations could support this resolution.	This resolution was introduced and approved on December 16, 2015. The full wording of the resolution is included as Appendix D in this document.
5.2 – Identify potential supporters and non-supporters	Medium term	Identify entities and organizations that would likely support or oppose inclusion of firefighter occupational cancer as a disease covered by the Public Safety Officers' Benefits (PSOB) program, or the recognition of cancer as a firefighter occupational disease.	Major fire service organizations.	This item was addressed by the Supporters and Opponents of Potential PSOB Benefits/Inclusion group at the October meeting. A full account of their recommendations is in the meeting report.
5.3 – Use the Zadroga Act as an example of Federal legislation that recognizes firefighter cancer as an occupational disease and has a compensation process for paying benefits related to firefighter cancer	Short term	The Zadroga Act has provided important health benefits to firefighters and others exposed to hazards associated with the 9/11 terrorist attacks. Continued funding for these programs will assure that people covered by this program retain these benefits. This serves as an example of the Federal government recognizing the link between firefighters and cancer.	The IAFF and CFSI are taking a lead role in efforts to re-authorize and fund the programs provided through the Zadroga Act.	In December 2015, the \$8.1 billion James Zadroga 9/11 Health and Compensation Reauthorization Act passed as an attachment to the omnibus government funding and tax-break bill. The 9/11 provision is for \$3.5 billion and extends the World Trade Center Health Program until the year 2090. It will spend \$4.6 billion to extend the Victims Compensation Fund for five years and makes up for a shortfall.



5.4 – Identify and quantify the financial impact of firefighter cancer inclusion in PSOB benefits, including information on cost-saving that would result from prevention	Medium term	A likely element of discussions on the inclusion of occupational cancer and PSOB benefits will be the projected costs.	The NFFF will take the lead in estimating these costs.	This was discussed at the April 2016 Steering Committee meeting. It is felt that PSOB decisions regarding 9-11 claims related to cancer could chart a course for addressing this issue with PSOB. Those decisions on pending claims will begin being released later in 2016.
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6. Identify any next steps for the Steering Committee – documentation – future meetings?

Action Item	Time frame	Background	Organizational Support	April 2016 Status
6.1 – Continue the work of the Steering Committee and of the Fire Service Occupational Cancer Alliance	Short term	<p>“Fire Service Occupational Cancer Alliance” will be the name for the conglomeration of representatives from the January 2015 meeting. It is recommended that the Fire Service Occupational Cancer Alliance meet as soon as possible, contingent upon funding and other scheduling issues.</p> <p>The following issues were referred to the Alliance for consideration in the next meeting:</p> <ul style="list-style-type: none"> • A summary of the action items of the May Steering Committee Meeting; • Discuss and identify specific gaps in past, current, and planned research on firefighter occupational cancer (Action Item 1.5); • Discuss a unified branding efforts (Action Item 2.2); • Identify entities and organizations that will likely support or oppose PSOB program changes to include occupational cancer (Action Item 5.2); • Discuss emerging issues and issues that emerged between this meeting and the next meeting. 	NFFF will continue to coordinate meetings and provide other support.	<p>A meeting of the FSOCA Steering Committee was conducted in Washington D.C. April 8, 2016. Recommendations were reviewed, assigned or reassigned, given milestones, and timelines.</p> <p>The Next Steps include:</p> <ol style="list-style-type: none"> 1. Complete and publish the Report covering Alliance actions from January 2016- April 2016. 2. Create a firefighter cancer electronic tool kit. 3. Consider a National Firefighter Cancer Symposium. 4. Plan the next meeting of the entire Alliance- perhaps in conjunction with the national symposium. <p>Note: the NFFF will form their affiliate organization to effectively seek funding for Alliance projects and NFFF efforts.</p>



Appendix A: Attendees at the October 2015 Meeting of the Fire Service Occupational Cancer Alliance

Nick Baskerville	IABPFF
Ed Beuerlein	IAFF Local #493
James Brinkley	IAFF
George Broyles	U.S. Forest Service
Jen Brust	Honeywell
Gregory Bulanow	North Charleston (SC) Fire Department
Jeff Burgess, M.D.	University of Arizona
Josh Burnheimer	Scott Safety
Sean Carroll	Congressional Fire Service Institute
Donna Clark	NFFF
Dennis Compton	NFFF Board of Directors
Henry Costo	LION
Joe Domitrovich	U.S. Forest Service
Steve Edwards	NAFTD
Dan Eggleston	IAFC-VCOS
Cindy Ell	Firefighter Cancer Foundation
Rita Fahy, Ph.D.	NFPA
Joseph Finn	Boston (MA) Fire Department
Bryan Frieders	Firefighter Cancer Support Network
Billy Goldfeder	NFFF Board of Directors
John Granby	LION
Daniel Gray	Fairfax County (VA) Fire and Rescue Department
Thomas Hales	CDC-NIOSH
Robert Halton	Pennwell-Fire Engineering
Michael Hamrock, M.D.	Last Call Foundation
Domingo Herraiz	Motorola Solutions
Ken Holland	NFPA
Donald Hroma	Chicago (IL) Fire Department
Anthony Hudgins	IAFF Local #22
Kara Kalkbrenner	Phoenix (AZ) Fire Department
JoEllen Kelly	NFFF
Scott Lantz	Loudon County (VA) Fire and Rescue
Gregory Mackin	Boston (MA) Fire Department
James Masiello	Fairfax County (VA) Fire and Rescue Department
Brian McQueen	NVFC
Patrick Morrison	IAFF
John Niemiec	iAFF Local #268
Anita Paratley	San Francisco (CA) Fire Department
Richard Paris	IAFF Local #718
Catherine Patterson	FEMA-DHS



Deborah Pendergast	iWomen
Lawrence Petrick	IAFF
Brad Pitzl	Plymovent
Susan Proels	NFFF
Allan Rice	NAFTD
Kevin Roche	NFFF
Thomas Ryan	IAFF Local #2
Tricia Sanborn	NFFF
Marc Sanders	IAFF Local #718
James Seavey	IAFF-VCOS
Tim Sendelbach	Firehouse
Ron Siarnicki	NFFF
Demond Simmons	IABPFF
Ed Smith	IAFF Local #36
Tony Sneider	Philadelphia (PA) Fire Department
Joe Sol	U.S. Forest Service
Victor Stagnaro	NFFF
Tracy Thomas	IAFC-Safety, Health, and Survival Section
Bill Troup	U.S. Fire Administration
Bill Webb	CFSI
Michael Wieder	IFSTA/Fire Protection Publications



Appendix B: Attendees at the April 2016 FSOCA Steering Committee Meeting

George Broyles	U.S. Forest Service
Jeff Burgess, M.D.	University of Arizona
Josh Burnheimer	Scott Safety
Dennis Compton	NFFF Board of Directors
Kenny Fent, Ph.D.	CDC-NIOSH
Joseph Finn	Boston (MA) Fire Department
Bill Gillespie	VFIS
Tim Hill	IAFF Local #493
Donald Hroma	Chicago (IL) Fire Department
Kara Kalkbrenner	Phoenix (AZ) Fire Department
JoEllen Kelly, Ph.D.	NFFF
Patrick Morrison	IAFF
Allan Rice	NAFTD
Kevin Roche	NFFF
Tricia Sanborn	NFFF
Ronald Siarnicki	NFFF
Demond Simmons	IABPFF
Victor Stagnaro	NFFF
Amy Tippett	NFFF
Tracy Thomas	IAFC-Safety, Health, and Survival Section
Keith Tyson	Firefighter Cancer Support Network



Appendix C: CFSI Resolution in support of the James Zadroga 9/11 Health and Compensation Reauthorization Act

**Offered by:
International Association of Fire Fighters
National Fallen Firefighters Foundation**

Whereas, fire fighters and others who responded to the World Trade Center on 9/11 and in the following months selflessly put their lives and health on the line to help America recover from a national disaster, and

Whereas, responders were exposed to a toxic mix of dust and chemicals, including carcinogens such as benzene, asbestos and dioxins, as well as extreme psychological trauma, and

Whereas, more than 30,000 individuals suffer from illness or injury resulting from the 9/11 attacks. Chronic diseases such as respiratory and gastrointestinal diseases, cancer and other physical maladies continue to plague responders and survivors. Screening has also found a significant number of responders suffering from psychological symptoms, including post-traumatic stress disorder, and

Whereas, cancer, in particular, continues to develop in responders and survivors due to its long latency period. To date, medical research has identified more than 60 types of cancer caused by the 9/11 toxins. Nearly 3000 individuals have been diagnosed with cancers caused or worsened by the aftermath of the attacks, a number which will surely continue to rise, and

Whereas, continued monitoring is essential for all World Trade Center responders as the long-term consequences of the sustained, unprecedented exposure they experienced are unknown. Regular monitoring will help ensure that latent diseases, such as cancer, are detected and treated early, and

Whereas, these illnesses have caused major financial strains on those exposed, many of whom are no longer able to work and would face the high price of ongoing medical treatment without the World Trade Center Health Program, and

Whereas, without Congressional action, the World Trade Center Health Program and the September 11th Victim Compensation Fund will expire in October 2015 and October 2016 respectively; now

Therefore, it is resolved that the Congressional Fire Services Institute supports the reauthorization of the James Zadroga 9/11 Health and Compensation Act and encourages Members of Congress to support reauthorization of the act.



Appendix D: CFSI Resolution in Support of Federal Legislation, Funding, and Policies to Address Firefighter Occupational Cancer

Offered by:

**National Fallen Firefighters Foundation
International Fire Service Training Association
International Association of Arson Investigators
International Association of Black Professional Fire Fighters
International Association of Fire Chiefs
International Association of Fire Fighters
International Code Council
National Fire Protection Association
National Volunteer Fire Council
North American Fire Training Directors**

Whereas, firefighting is known to be inherently dangerous, and independent scientific research continues to show a strong correlation between firefighting and instances of occupational cancer; and

Whereas, firefighters are uniquely exposed to a wide variety of hazards and known carcinogens; and

Whereas, scientific research indicates that firefighters have an increased risk of certain cancers such as colon, lung, melanoma, mesothelioma, multiple myeloma, non-Hodgkin's lymphoma, non-melanoma skin cancer, prostate, rectal and stomach cancers, etc.; and

Whereas, additional research is needed to better prevent cancer-related exposures and to enable the fire service to provide a safer work environment that prevents cancer-related illnesses and line-of-duty deaths; and

Whereas, there is a need to develop national standards, training programs, more effective protective equipment and other safeguards to prevent firefighter exposures to carcinogens; and

Whereas, these efforts will need to include treatments and benefits because it is not realistic to believe that firefighter occupational cancer can be completely eradicated;

Therefore, it is resolved that the Congressional Fire Services Institute support federal legislation, funding and policies directed toward:

- An inclusive national statistical cancer reporting system for firefighters,
- Funding for research to reduce the instances of occupational cancer to firefighters and the development of more effective treatments,
- Public recognition of firefighter line-of-duty deaths resulting from certain cancers identified through scientific research,
- Federal presumptive line-of-duty death benefits, including the Public Safety Officers' Benefits (PSOB) program, that cover firefighters who die from certain cancers identified through scientific research;
- Implementation of the work of the Fire Service Occupational Cancer Alliance as they continue their unified efforts to address myriad issues relating to cancer in firefighters.



Appendix E: Proposal from Chief Dennis Compton for the 2016 CFSI Seminar

Title: *Fire Service Occupational Cancer - A National Policy Perspective*

Format: Panel Discussion

Moderator: Dennis Compton; Past IFSTA Board Chair and Current NFFF Board Chair

Panelists:

Bryan Frieders; President of the Firefighter Cancer Support Network and Division Chief, San Gabriel, CA Fire Department

Ron Siarnicki; Executive Director; NFFF

Pat Morrison; Assistant to the General President for Occupational Health, Safety and Medicine, IAFF

Jim Seavey; Board Member for VCOS and NVFC; Member of the Cabin John Volunteer Fire Department, and Captain on the Washington, DC Fire and EMS Department

Description:

Firefighter occupational cancer is a significant concern in the fire service. As a high priority for action, the American Fire Service is creating energy and commitment to achieving goals surrounding this hazard to all firefighters - career and volunteer. In 2015, the NFFF facilitated the creation of the Fire Service Occupational Cancer Alliance. This group of fire service professionals formed an Alliance of Chief Officers; Labor Leaders; Researchers; Trainers; Doctors; Cancer Support Groups; Fire Service Media; and others. This session covers the 2015 Report and Implementation Plan created by the Fire Service Occupational Cancer Alliance addressing prevention, research, presumptive legislation, and many other aspects of cancer in the fire service.

Learning Objectives:

1. Review the history and process for creating the Fire Service Occupational Cancer Alliance and an overview of their work in 2015.
2. Discuss specific action items identified by the Fire Service Occupational Cancer Alliance aimed at reducing exposures and improving the support provided to firefighters dealing with the issue of cancer.
3. Explore current firefighter occupational research, as well as gaps in research, that should be addressed.
4. Review the current status of presumptive legislation nationwide and PSOB benefits relating to occupational cancer.

AV Needs:

The Panelists will require the capability to utilize PowerPoint during the Seminar.



Appendix F: Resources

The NFFF maintains a Dropbox file containing resources for uses related to the Fire Service Occupational Cancer Alliance and its outreaches. The link is:

https://www.dropbox.com/sh/hjolkf3xelsoxnw/AAAh_6bZYRStmgfTfvGl_5Pza?dl=0

Below are some selected resources pertaining to fire service occupational cancers.

Meeting Reports of the Fire Service Occupational Cancer Alliance

Fire Service Occupational Cancer Alliance Steering Committee May 2015 Meeting Report and Action Plan

<https://www.dropbox.com/s/0psqi80j402706p/Cancer%20Steering%20Committee%20May%202015%20Action%20Plan%20.pdf?dl=0>

Occupational Cancer in the Fire Service-Report from the January 2015 Strategy Meeting

[https://www.dropbox.com/s/6pdroqrxq0vzurc/Report of the Fire Service Occupational Cancer Alliance Meeting January 2015.pdf?dl=0](https://www.dropbox.com/s/6pdroqrxq0vzurc/Report%20of%20the%20Fire%20Service%20Occupational%20Cancer%20Alliance%20Meeting%20January%202015.pdf?dl=0)

Research Studies-CDC-NIOSH

Evaluation of Chemical and Particle Exposures During Vehicle Fire Suppression Training

<https://www.dropbox.com/s/2xp1xvv4e2mokpi/Exposures%20During%20Vehicle%20Fire%20Suppression%20Training--CDC-NIOSH%20Article.pdf?dl=0>

Evaluation of Chemical Exposures during Fire Fighter Training Exercises Involving Smoke Simulant

<https://www.dropbox.com/s/voe7pxhkpq7kni8/Exposures%20During%20Training--CDC-NIOSH%20Report.pdf?dl=0>

Evaluation of Dermal Exposure to Polycyclic Aromatic Hydrocarbons in Fire Fighters

<https://www.dropbox.com/s/r0ebtipabcboanj/Dermal%20Exposures--CDC-NIOSH%20Report.pdf?dl=0>

Exposure-response relationships for select cancer and non-cancer health outcomes in a cohort of US firefighters from San Francisco, Chicago and Philadelphia (1950-2009)

<https://www.dropbox.com/s/cvo0yogt89fa5m7/NIOSH%20San%20Francisco%2C%20Chicago%2C%20Philadelphia%20Cancer%20Study.pdf?dl=0>

Other Research Studies

Cancer incidence among firefighters: 45 years of follow-up in five Nordic countries (Pukkala et al.)

<https://www.dropbox.com/s/d0di6ykr6hwjvk/Pukkala%20et%20al.%202014%20OEM%20Cancer%20among%20Nordic%20fire%20fighters.pdf?dl=0>

Cancer Risk Among Firefighters: A Review and Meta-analysis of 32 Studies (LeMasters et al.)

<https://www.dropbox.com/s/1lb8zw2v6dcje58/LeMasters%20et%20al.%202006%20Cancer%20Risk%20Among%20Firefighters.pdf?dl=0>

Final Report Australian Firefighters' Health Study (Monash University)

<https://www.dropbox.com/s/6ztxcqr3i3wkxb/Monash%20University%20Australian%20Firefighter%20Health%20Research%20Study.pdf?dl=0>



Interim Report Cardiovascular & Chemical Exposure Risks in Modern Firefighting (Horn et al.)
https://www.fsi.illinois.edu/documents/research/CardioChemRisksModernFF_InterimReport2016.pdf

Persistent organic pollutants including polychlorinated and polybrominated dibenzo- p-dioxins and dibenzofurans in firefighters from Northern California (Shaw et al.)
<https://www.dropbox.com/s/4u42g8u1wig60ke/Shaw%20et%20al.%20POPs%20in%20firefighters%20CHEM%20print%20.pdf?dl=0>

Tobacco Use Research Studies

A National Qualitative Study of Tobacco Use Among Career Firefighters and Department Health Personnel (Poston et al.)
<https://www.dropbox.com/s/8yxvzce2e5qaosp/2011%20Poston%20et%20al.%20AHA%20tobacco.PDF?dl=0>

Tobacco Use Among Firefighters in the Central United States (Haddock et al.)
<https://www.dropbox.com/s/b3j9a3oc8oncyzo/2011%20Haddock%20tobacco%20FIRE%20Study.PDF?dl=0>

Videos

Boston Fire Department-Firefighters recall colleagues who died from occupational cancer
<https://www.youtube.com/watch?v=hOvBypsaHog>

Boston Fire Department-Cancer Prevention in the Boston Fire Department
<https://www.youtube.com/watch?v=bXd5sb6fWNM&feature=youtu.be>

Breathing in Cancer (NFFF)
<https://www.dropbox.com/sh/fbkxk5l8jzz3plo/AADm4SjvheQ6SHFsRw1aiArLa?dl=0>

Fighting Fires/Fighting Cancer FASNY Members Share their Stories
<https://www.youtube.com/watch?v=WV4dUoq330A>

San Antonio Fire Department-Local 624 IAFF Cancer video
https://www.dropbox.com/s/839a0bi0iyzav2t/SAFD_CTF_Our_Battle%20.mov?dl=0

The Silent Killer-Firefighter Cancer (NFFF)
https://www.youtube.com/watch?v=fyZ_HQM9Z_c

Websites

Firefighter Cancer Support Network www.firefightercancersupportnetwork.com

International Association for Research on Cancer (IARC) www.iarc.fr

International Association of Fire Chiefs Safety and Health Resources
<http://www.iafc.org/Operations/content.cfm?ItemNumber=4706>

International Association of Fire Fighters Cancer Presumptive Laws <http://www.iaff.org/hs/phi/disease/cancer.asp>



International Firefighter Cancer Foundation www.ffcancer.org

Fire Service Joint Labor Management Wellness Fitness Initiative www.iaff.org/hs/wfi/

National Volunteer Fire Council <http://www.nvfc.org/hot-topics/cancer>

Other Resources

Boston Fire Department Primary Care Evaluation

<https://www.dropbox.com/s/e26jemo3sml2xpd/PRIMARY%20CARE%20EVALUATIONS%20FOR%20FIREFIGHTERS.docx?dl=0>

Taking Action against Cancer in the Fire Service-Firefighter Cancer Support Network White Paper

<http://www.firefightercancersupport.org/wp-content/uploads/2013/08/Taking-Action-against-Cancer-in-the-Fire-Service.pdf>



NFFF Mission

Our mission is to honor and remember America's fallen fire heroes and to provide resources to assist their survivors in rebuilding their lives and work within the fire service community to reduce firefighter deaths and injuries.

www.firehero.org



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